



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ON FOSCULARIA CONKLINI, NOV. SPEC., WITH A
KEY FOR THE IDENTIFICATION OF THE
KNOWN SPECIES OF THE GENUS.

THOS. H. MONTGOMERY, JR.

I. FOSCULARIA CONKLINI, nov. spec.

Corona with five lobes, the dorsal largest, the ventral next in size, the lateral very small. The lobes are broad, without knobs and confluent at their points of insertion upon the corona. Vibratile cilia, of a length not greater than that of the corona and sometimes considerably shorter, line these lobes in a single row, but are not present between the lobes. Corona usually less than half the length of the trunk, which is slender and not very sharply demarcated from the foot. Foot fully two and a half times the length of the rest of the body, terminating in a peduncle which is as broad as long. Dorsal and lateral sense organs are present, but no eyes in the adult. The body cavity is closely filled with numerous minute floating corpuscles, so that the animal appears dark by transmitted light. Tube large, gelatinous, usually with foreign particles adhering to its surface. Length about that of *F. campanulata* Dobie. Two or three ova are frequently found in the oviduct at once, and from thirty to forty male eggs within the tube.

This species I found in considerable numbers in a pond on the grounds of the University of Pennsylvania attached singly to *Myriophyllum*, during the early portion of 1903. It is a pleasure to me to name it in honor of my friend, Prof. Edwin G. Conklin. A full description of the anatomy with figures is reserved for another paper upon the morphology of the Flosculariidae. The new form differs from the closely related *F. ambigua* Hudson in the shortness of the cilia and their vibratile nature (they are not stiff radiating setæ) in the much greater length of the foot and its very short peduncle, in the rather cylindrical and narrow corona, in its smaller size, and particularly in its germarium being rounded whereas in *ambigua* I have found it to be elongate and bent.

2. KEY TO THE SPECIES OF FLOSCULARIA.

All the species of *Floscularia* (Oken, 1815) described up to the year 1886 are described and figured in the monograph of Hudson and Gosse. Of those described since that date I have seen the descriptions of all except *uniloba* Wierzejski (1892), so that this species could not be included in the present key. *F. brachyura* Barrois and Daday (1894) is considered unrecognizable : their figure represents a much contracted specimen, and the diagnosis is simply : "Pede rudimentario, in aculeo curvato exeunti, urcello nullo." But I differ from Rousselet (1893b) in regarding *tenuilobata* Anderson as distinct from *coronetta* Cubitt. *F. chimæra* Hudson is included, although it is probable this form will be subsequently found to belong to another family of the Rotatoria. Unless otherwise stated all the species entered will be understood to be sessile and to possess a gelatinous tube.

- I. Foot ending in two toes (pelagic ; no tube ; 1 dorsal eye ; corona with a smaller ventral and a larger dorsal lobe which overhangs the corona).
 - chimera* Hudson (1889).
- II. Foot without toes or peduncle (pelagic ; foot very slender and whip-like ; a single large dorsal coronal lobe and two smaller ventral lobes separated by a very slight constriction).....*atrocoides* Wierzejski (1893).
- III. Foot terminating in a peduncle.
 - A. Corona without lobes.
 - a, 1. Cilia short, in a single row (cilia mainly on dorsal and ventral margins of the corona ; trunk much larger than corona and little shorter than foot ; tube large).....*edentata* Collins (1872).
 - a, 2. Short and vibratile cilia on outer coronal margin, and on 5 prominences of the inner margin longer, non-vibratile cilia (pelagic ; tubes very slender).
 - pelagica* Rousselet (1893a).
 - B. Coronal margin produced into lobes.
 - a, 1. Short cuticular spines on coronal margin (corona with 5 broad lobes, the dorsal largest, all bearing long and stiff cilia).....*spinata* Hood (1893).
 - a, 2. No cuticular spines on margin of the corona.
 - b, 1. Corona with a single (dorsal) lobe (foot much enlarged near its posterior end ; 2 eyes ; a tuft of long cilia upon the dorsal lobe and shorter cilia upon the remaining margin of the corona ; pelagic).
 - libera* Zacharias (1894).
 - b, 2. Corona with two lobes, a dorsal and a ventral.
 - c, 1. Lobes short, corona little wider than the trunk (short, non-vibratile cilia on the lobes only ; 2 cervical eyes).....*calva* Hudson (1885).
 - c, 2. Lobes large, corona much wider than the trunk (vibratile cilia on the whole margin of the corona ; 2 eyes near the summit of the dorsal lobe)*mutabilis* Hudson (1885).
 - b, 3. Corona with 3 lobes.

c, 1. Dorsal lobe with two long, flexible, non-ciliated processes (dorsal lobe much the largest, overarching the corona; short, vibratile cilia fringing the whole coronal margin in a double row; 2 eyes).
hoodii Hudson (1883).

c, 2. Dorsal lobe with 2 short, non-ciliated, horn-like processes on its dorsal surface (dorsal lobe largest, overarching the corona; entire margin of corona with an inner row of shorter and an outer row of longer cilia; no eyes).....*cucullata* Hood (1894).

c, 3. Dorsal lobe without any such processes.

d, 1. Lobes small, the dorsal one not overarching the corona.
gossei Hood (1892b).

d, 2. Lobes large, the dorsal one overarching the corona.

e, 1. Lobes bearing cilia on their tips only (3 rings below the corona).
annulata Hood (1888).

e, 2. Entire margin of corona with a double row of cilia (inner row of short and outer of long cilia; lobes deeply marginate).
trilobata Collins (1872).

b, 4. Corona with 4 lobes (each bearing a tuft of very long cilia).
quadrilobata Hood (1892a).

b, 5. Corona with 5 lobes.

c, 1. Lobes very slender, longer than the whole trunk and nearly as long as the foot (with long cilia on their lateral borders).
millsii Kellicott (1885).

c, 2. Lobes shorter than the trunk.

d, 1. A flexible, slender, non-ciliated process on the dorsal lobe (lobes knobbed).....*cornuta* Dobie (1849).

d, 2. No such process on any of the lobes.

e, 1. Dorsal lobe trifid at the tip (dorsal lobe much the largest, the other lobes are slight projections of the coronal margin, and none with knobs; cilia rather short, limited to the lobes).
trifidlobata Pittock (1895).

e, 2. Dorsal lobe not trifid.

f, 1. Peduncle about one third the length of the extended foot, flexible (lobes not knobbed, rather pointed, the dorsal the largest and the lateral the smallest; cilia long, non-vibratile, along the whole coronal margin).....*longicaudata* Hudson (1883).

f, 2. Peduncle many times shorter than the foot.

g, 1. Lobes very slender, linear, composing almost the whole of the corona (lobes knobbed, with long cilia on their ends and short cilia elsewhere)...*tenuilobata* Anderson (1890).

g, 2. Lobes not linear, rest of corona distinct.

h, 1. Lobes knobbed.

i, 1. Cilia along the whole coronal margin.

j, 1. Lobes inserted on the coronal margin at some distance from each other (lobes very mobile and shorter than the diameter of the corona).
evansonii Anderson and Shephard (1892).

j, 2. Lobes confluent at their bases (fully as long as the diameter of the corona, not mobile; cilia long, non-vibratile; 2 eyes).....*coronetta* Cubitt (1869).

- i*, 2. Cilia limited to the knobs of the lobes.
- j*, 1. Cilia longer than the whole animal, extensile and very mobile.....*mira* Hudson (1885).
- j*, 2. Cilia not longer than the trunk, not clearly mobile.
 - k*, 1. Foot three times the length of the body (coronal lobes very short ; 2 eyes)...*cyclops* Cubitt (1871).
 - k*, 2. Foot barely twice the length of the body (coronal lobes well developed ; no eyes).
 - ornata* Ehrenberg (1830).
- k*, 2. Lobes not knobbed.
 - i*, 1. Dorsal lobe overarching the corona so that its cilia point towards the foot (cilia non-vibratile, long).
 - torquilobata* Thorpe (1891).
 - i*, 2. Dorsal lobe not overarching the corona.
 - j*, 1. Cilia shorter than the corona, vibratile (cilia limited to the lobes ; lateral lobes very small ; the others somewhat triangular ; corona usually less than half as long as the trunk ; peduncle very short).
 - conklini* nov. spec.
 - i*, 2. Cilia longer than the corona, non-vibratile.
 - k*, 1. All five lobes distinct (corona as large as the trunk with cilia on its whole margin ; peduncle long).
 - campanulata* Dobie (1849).
 - k*, 2. Lateral lobes small and indistinct.
 - l*, 1. Corona not ornamented with dots, tube distinct (germarium elongate, extending down the left side and across the whole diameter of the venter).....*ambigua* Hudson (1883).
 - l*, 2. Corona ornamented with dots in symmetrical patterns, apparently no tube (living within an algal growth).....*algicola* Hudson (1886).
 - b*, 6. Corona with 7 lobes.
 - c*, 1. Lobes not knobbed (long cilia around the whole margin of the corona).
 - diadema* Petr (1891).
 - c*, 2. Lobes knobbed (cilia restricted to these knobs ; 2 eyes).
 - regalis* Hudson (1883).

BIBLIOGRAPHY.

Anderson, H. H.

Notes on Indian Rotifers. Journ. Asiatic Soc. Bengal, Calcutta, 58, p. 345, 1890.

Andérsen, H. H., and Shephard, J.

Notes on Victorian Rotifers. Proc. Roy. Soc. Victoria (n. s.), 4, p. 69, 1892.

Barrois, T., and Daday.

Contribution à l'étude des Rotifères de Syrie et description de quelques espèces nouvelles. Rev. Biol. du Nord de la France, 6, No. 10, 1894.

Collins.

New Species of Rotatoria. Science Gossip, p. 9, 1872.

Cubitt, C.

Floscularia coronetta, a new species. Month. micr. Journ., 2, p. 133, 1869.

Floscularia Cyclops, a new species. Ibid., 6, p. 83, 1871.

Dobie, W. M.

Description of two new species of Floscularia with remarks. Ann. Mag. Nat. Hist. (2), 4, p. 233, 1849.

Ehrenberg, C. G.

Beiträge zur Kenntniss der Organisation der Infusorien und ihrer geographischen Verbreitung. Abh. Akad. Wiss. Berlin, 1830.

Hood, J.

Floscularia annulata. Science Gossip, 1888.

Floscularia quadrilobata, n. sp. Internat. Journ. Micr. (3), p. 26, 1892 (a),

Floscularia gosseii, a new Rotifer. Ibid., p. 73, 1892 (b).

Three new Rotifers. Journ. Quekett Micr. Club (2), 5, p. 281, 1893.

On Floscularia cucullata, sp. n. Ibid., p. 335, 1894.

Hudson, C. T.

Five new Floscules (Floscularia), etc. Journ. Roy. Micr. Soc. (2), 3, p. 161, 1883.

On four new Species of the genus Floscularia, etc. Ibid., 5, p. 608, 1885.

Hudson, C. T., and Goose, P. H.

The Rotifera; or Wheel-Animalcules. London, 1886-1889.

Kellicott, D. S.

New Floscule (Floscularia Millsii). Proc. Amer. Soc. Micr. 8th Annual Meet., p. 48, 1885.

Oken, L. v.

Lehrbuch der Naturgeschichte, 1815.

Petr, F.

Vernici (Rotatoria) vysociny ceskomoravské. Sitz.-Ber. k. Böhmischa Ges. Wiss. Prag., 2, p. 215, 1891.

Pittock, G. M.

On Floscularia trifidlobata, Sp. Nov. Journ. Quekett Micr. Club, 6, p. 77. 1895.

Rousselet, C. F.

On *Floscularia pelagica*, n. sp., and notes on several other Rotifers. Journ. Roy. Micr. Soc., p. 444, 1893 (a).

List of new rotifers since 1889. Ibid., p. 450, 1893 (b).

Thorpe, V. G.

New and Foreign Rotifera. Ibid., p. 301, 1891.

Wierzejski, A.

Rotatoria (wrolki) Galicyi. Bull. Acad Cracovie, p. 402, 1892.

Floscularia atrochoides, n. sp. Zool. Anz., 16, p. 312, 1893.

Zacharias, O.

Faunistische Mittheilungen, 2te Forschungsber. Biol. Stat. Plön., 1894.

UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA,

May 1, 1903.